

PENDING CLAIMS

AMAT Reference No.: 000784USAC08

F&R Reference No.: 05542-146009

Serial No.: Unassigned Filed: TO BE FILED BY R. MULCAHY

Entitled: POLISHING PAD FOR IN-SITU ENDPOINT DETECTION

1. A polishing article for use in a chemical mechanical polishing system, said polishing article comprising:

a polishing pad having a polishing surface and a bottom surface; and

a window from said polishing surface to said bottom surface, said window including a solid light transmissive element abutting and secured to the polishing pad, the solid light transmissive element being more transmissive to light than the polishing surface.

2. The polishing pad of claim 1, wherein a top surface of said light transmissive element is flush with the polishing surface.

3. The polishing article of claim 1, wherein side surfaces of said light transmissive element abut side surfaces of said polishing pad.

4. The polishing article of claim 1, wherein said light transmissive element is integrally molded into the polishing pad.

5. The polishing article of claim 1, wherein said polishing pad includes a covering layer having the polishing surface and a backing layer.

6. The polishing article of claim 5, wherein said light transmissive element is positioned in said covering layer.

7. The polishing article of claim 6, wherein a bottom surface of said light transmissive element is flush with a bottom surface of said covering layer.

8. The polishing article of claim 6, wherein a top surface of said light transmissive element is flush with the polishing surface.

9. The polishing article of claim 6, wherein said light transmissive element and said covering layer have the same thickness.

10. The polishing article of claim 6, wherein said light transmissive element is made of a polymer material.

11. The polishing article of claim 6, wherein said backing layer is removed in an area overlaid by said light transmissive element.

12. The polishing article of claim 1, wherein said light transmissive element is made of a polymer material.

13. A polishing article for use in a chemical mechanical polishing system, said polishing article comprising:

a polishing pad having a polishing surface and a bottom surface; and
a window from said polishing surface to said bottom surface, the window including a solid light transmissive element integrally molded to the polishing pad, the light transmissive element being more transmissive to light than the polishing surface.

14. The polishing article of claim 13, wherein said polishing pad and said light transmissive element include polyurethane.

15. The polishing article of claim 13, wherein a top surface of said light transmissive element is flush with the polishing surface.

16. The polishing article of claim 13, wherein side surfaces of said light transmissive element abut side surfaces of said polishing pad.

17. The polishing article of claim 13, wherein said polishing pad includes a covering layer having the polishing surface and a backing layer.

18. The polishing article of claim 17, wherein said light transmissive element is positioned in said covering layer.

19. The polishing article of claim 18, wherein said light transmissive element and said covering layer have the same thickness.

20. The polishing article of claim 19, wherein said backing layer is removed in an area overlaid by said light transmissive element.

21. A polishing article for use in a chemical mechanical polishing system, said polishing article comprising:

a light transmissive first layer spanning the polishing article; and
a second layer that is less transmissive to light than the first layer, the second layer having an aperture therethrough.

22. The polishing article of claim 21, wherein the first layer includes a polishing surface.

23. The polishing article of claim 22, wherein the second layer is a backing layer adjacent the first layer.

24. The polishing article of claim 21, wherein said first layer includes polyurethane.

25. The polishing article of claim 21, wherein said second layer includes polyurethane.

26. The polishing article of claim 21, wherein the aperture comprises a hole through the second layer.

50185439.doc